Frontline Learning Research 2 (2013) 86-98 ISSN 2295-3159

Team entitativity and teacher teams in schools: Towards a typology

Katrien Vangrieken^a, Filip Dochy^a, Elisabeth Raes^a, Eva Kyndt^a

^aUniversity of Leuven, Belgium

Article received 17 April 2014 / revised 16 December 2014 / accepted 18 December 2014 / available online 20 December 2014

Abstract

In this article we summarise research that discusses 'teacher teams'. The central questions guiding this study are 'How is the term 'teacher team' used and defined in previous research?' and 'What types of teacher teams has previous research identified or explored?'. We attempted to answer these questions by searching literature on teacher teams and comparing what these articles present as being teacher teams. We attempted to further grasp the concept of teacher teams by creating a typology for defining different types of teacher teams. Overall, the literature pertaining to teacher teams appeared to be characterised by a considerable amount of haziness and teacher 'teams' mostly do not seem to be proper 'teams' when keeping the criteria of a team as defined by Cohen and Bailey (1997) in mind. The proposed typology, characterising the groups of teachers by their task, whether they are organised disciplinary or interdisciplinary, whether they are situated within or cross grades, their temporal duration and degree of team entitativity or 'teamness', appears to be a useful framework to further clarify different sorts of teacher 'teams'.

Keywords: Teams; Teacher teams; Typology; Entitativity

1. Introduction: Beyond 'egg-crate' schools – Teams in schools

Overall, teaming in schools appears to be quite a challenge, not the least because of a long-standing culture of teacher isolation and individualism in schools (Gajda & Koliba, 2008). Teachers may feel that their autonomy is threatened by collaboration and that conflicts that they previously tended to avoid come to the surface (Somech, 2008). Teachers appear to be predominantly confined in their classroom in which they work in isolation, as such creating what Lortie (1975, in Westheimer, 2008) calls 'egg-crate' schools.

Corresponding author: Katrien Vangrieken, University Leuven: Centre for research on professional learning & development and lifelong learning, Dekenstraat 2, Bus 3772, 3000 Leuven, Belgium, katrien.vangrieken@student.kuleuven.be http://dx.doi.org/10.14786/flr.v1i2.23



Despite this prevalent resistance to collaborate, a lot of studies point out to positive effects of a team structure in schools.

Teaming in schools appears to be a broad and rather vague concept with varying interpretations in the literature. Nonetheless, it is of vital theoretical and practical importance to clarify this concept. In order to be able to properly discuss teacher teams it is essential to have a clear view on what such teams actually are and whether it is warrantable to speak of 'teacher teams' in general or whether there are different types of teacher teams. Cohen and Bailey (1997) already pointed at the importance of team types in discussing their results. Thus, the first aim of this article is to look at how the term 'teacher teams' is defined in previous research and what type of teams were explored in former scientific inquiry. The importance of this article is shown in the fact that there might be several types of teams in schools and that these might possess different levels of 'team entitativity' (the degree to which a 'team' actually is a team, the 'teamness' of teams). A clear typology thus could be useful in order to be able to draw warranted conclusions from former research that are applicable to a specific subset of teams since different types of teams may have different characteristics and thus different conclusions (for practice) may be justified. Aside from the description of a few rather vague categories, previous research on teacher teams seems to lack a clear typological framework in order to clearly conceptualise the complexity of the concept of teacher teams. Thus, the second aim of the article is to present a typology for using the team concept in schools.

In the following will be discussed what 'teacher teams' are and a search for clarification in the ruling conceptual confusion concerning this sort of teams will be undertaken.

2. Defining teams

Among the large number of existing definitions of 'teams', the one formulated by Cohen and Bailey (1997) seems to be the most comprehensive and mostly used in research on teamwork and team learning (e.g. Dochy, Gijbels, Raes, & Kyndt, 2014; Decuyper, Dochy, & Van den Bossche, 2010). These authors described a team as follows: "A team is a collection of individuals who are interdependent in their tasks, who share responsibility for outcomes, who see themselves and who are seen by others as an intact social entity embedded in one or more larger social systems (for example, business unit or the corporation), and who manage their relationships across organizational boundaries" (p. 241). Teams thus have to meet these six criteria.

Teams are seen as different from groups and are mostly defined more narrowly. As such, Van den Bossche, Gijselaers, Segers, and Kirschner (2006) stated that 'a team is more than a group of people in the same space, physical or virtual' (p.490). Salas, Burke, and Cannon-Bowers (2001) argued that teams differ from groups in task interdependence, structure and time span. In this sense, all teams are groups when groups are seen as sharing a common social categorisation and identity (Raes, Kyndt, Decuyper, Van den Bossche, & Dochy, submitted). But not all groups are teams since a team has characteristics that not necessarily have to be present to define a group.

3. On the use of the term 'team'

The articles primarily using the term 'team' show a considerable amount of diversity in the interpretation of this term which leads to a lack of conceptual clarity. Few studies clearly define what they mean when they speak of a 'team' or a 'teacher team'.

Several authors appeared to use the term 'team' without specifying what they mean with this term or who or what these so-called 'teams' include. A vast amount of studies were more exploratory in nature and did not start off by giving a definition of 'teams' but described the teams under study (e.g. Gunn & King, 2003; Hackmann, Petzko, Valentine, Clark, Nori, & Lucas, 2002; Meirink, Imants, Meijer, & Verloop, 2010; Somech, 2005). Even authors that focused on other denominations often seemed to use the term 'team'



somewhere in their article: some studies started off by writing about 'collaboration', 'community', 'department' or 'critical friends group' and then later on referred to 'teams' (mostly as a form of collaboration) without giving further explanation (e.g. Achinstein, 2002; Avila De Lima, 2001; Curry, 2008; Datnow, 2011; Dickinson, 2009; Kelchtermans, 2006; Leonard & Leonard, 2003; Lomos, Hofman, & Bosker, 2011; Scribner, Hager, & Warne, 2002; Visscher & Witziers, 2004; Williams, 2010). This mix up of different terms is confirmed by Westheimer (2008) who mentioned that schools use different denominations to describe collaboration between teachers, one of them being 'teams'. There thus appears to be a misconception among teachers regarding the term 'team' since it can be doubted whether what teachers define as being a 'team' matches any of the criteria for teams that are mentioned in the contemporary team literature (Smith, 2009). Smith (2009) furthermore concludes that in the perception of teachers, teamwork is depicted as mere collaboration between friends.

Amidst this inaudibility that accompanies the use of the term 'team', a few differentiations can be made in the different interpretations and uses of the term. This points at the importance of creating a teacher team typology: in order to be able to make clear and justified conclusions concerning teacher teams it is essential to clarify to which sort of teacher team these pertain.

4.1 Existing teacher team categories and team typologies

4.1.1 Existing teacher team categories

Some other authors already pointed at the diversity in the types of teams existing in schools. As such Supovitz (2002) stated that teams can be organised in different ways: for example same grade level or vertical (cross grades), teams can loop (teachers stay with the same students for several years), the members can stay in fixed grade levels, or teams can have mixed configurations. Pounder (1998) mentioned management teams or school advisory groups, special services teams, and interdisciplinary instructional teams. Park, Henkin, and Robert (2005) distinguished three comparable types of school teams: governance teams, instructional teams and planning teams. Governance teams do not have an instructional task but usually develop policies to meet specific needs of local communities. Principals, teachers, parents, and community members are the primary decision makers (Ellis & Fouts, 1994, in Park et al., 2005). According to Buckley (2000, in Park et al., 2005) instructional teams serve to realise flexible scheduling of instruction and higher integration of subject matters. This sort of teams can be organised according to grade level or subject. Planning teams are organised to tackle specific problems, which can be temporary or more complex and long term. Drach-Zahavy and Somech (2002) mentioned the fact that teams in schools serve different purposes and distinguished between management teams, instruction teams and pedagogic teams. The management teams are involved with administrative issues and participate in the management. The instruction teams gather around a subject area and their ultimate goal is to enhance teaching effectiveness. Finally, the authors state that pedagogic teams consist of teachers that teach in the same class and these teams are focused on improving the pedagogic decisions on specific pupils. The teams in the study of Tonso, Jung, and Colombo (2006) could be sorted out into administrative teams, grade level teaching teams (which were further divided into mixed content subteams) and social service teams. Smith (2009) focused on science teachers conceptions of teams and teamwork and listed eight possible teams that can emerge in a school setting. Management teams are charged with administrative issues, pedagogic teams are based on teachers teaching the same class, instructional teams are based on subject matter and serve to foster teacher effectiveness while interdisciplinary teams gather teachers from different subject areas who collaborate in teaching and learning. Appraisal teams provide assistance in making sense of problem situations. In informational teams the members merely exchange information that is needed to perform the teaching profession, instrumental teams provide practical support and emotional teams form a supportive network with encouraging words and sympathetic understanding. As might be clear, the last three types of teams could be seen as less of an actual 'team' compared to the first group.



Thus, the existing categories seem to focus primarily on the task of the teacher team to distinguish different types (Drach-Zahavy & Somech, 2002; Park et al., 2005; Pounder, 1998; Tonso et al., 2006). Only Supovitz (2002) explicitly focused on the organisational differences between the teams. This study attempts to expand the focus to other constructs than the task domain including task as well as organisational features.

4.1.2 Team typologies

Cohen and Bailey (1997), Devine, Clayton, Philips, Dunford and Melner (1999) and Hollenbeck, Beersma and Schouteden (2012) presented typologies of teams in general (not focused on teacher teams in specific). Cohen and Bailey (1997) distinguished four types of teams: work, parallel, project and management teams. Devine et al. (1999) presented a dimensional approach to a team typology using the dimensions product type and temporal duration. The crossing of these two typologies results in four team types: ad hoc project teams, ongoing project teams, ad hoc production teams and ongoing production teams. The article of Hollenbeck et al. (2012) searched to transcend different existing team typologies relying on a dimensional scaling approach based on three underlying constructs: skill differentiation, authority differentiation and temporal stability.

4.2 Transcending the different existing categorisations: A typology

Several authors thus pointed out to the existing diversity in teacher teams and distinguished different 'categories' of teams. These different categorisations overlap to some extent and the teams mentioned in the literature appear to fit into these categories to a certain degree. For that reason, the abovementioned existing categories, together with typologies of teams in general (not teacher teams in specific) (Devine et al., 1999; Hollenbeck et al., 2012; Cohen & Bailey, 1997), will serve as a starting point for the typology that is made here. They will be supplemented with other important categories and dimensions that play an important role in the literature discussing teacher teams. Overall, following defining features of a teacher team typology (presented in Appendix 1 Table 1) appear to be important.

4.2.1 Task

First, teacher teams may have tasks pertaining to *governance or management*. Pounder (1998) stated that management teams may include representative teachers, school support staff and parents or community members. Their main responsibility is advising the principal or other administrators in problem solving, planning and decision-making concerning school improvement. According to Ellis and Fouts (1994, in Park et al., 2005) governance teams develop policies to meet specific needs of local communities. Principals, teachers, parents and community members are the primary decision makers. Thus although teachers may be part of such teams, other representatives are often included as well.

Secondly, *instruction* appears to be a very important task for teacher teams: overall, teacher teams show a primary focus on instruction and student learning. Here instruction is seen as tasks teams perform that are directly related to student instruction. In order to create further clarification, two subtasks are distinguished here: instruction/teaching and planning of instruction. *Instruction/teaching* includes all tasks of teachers directly pertaining to the instruction of a particular group of students. This includes collaborating on the instruction, evaluation, and follow-up of a particular group of students. The subdivision of *planning of instruction* is seen as collaboratively planning instruction in general and is not necessarily limited to a common group of students. Tasks here entail in general the planning, coordinating and evaluating of curriculum (Flowers, Mertens, & Mulhall, 2000; Mertens & Flowers, 2004; Gunn & King, 2003; Yisrael, 2008). It may also include planning considering student assignment (flexible grouping strategies) and scheduling (Conley, Fauske, & Pounder, 2004), which are needed before the instructional process can start.

A third task, *problem-specific planning*, is inspired by the typology of Park et al. (2005) who stated that planning teams are responsible for tackling specific problems and can be of a temporary or a longer



lasting nature. Smith (2009) spoke of appraisal teams who offer assistance in making sense of problem situations and as such can be related to this task category. Although teams in the articles under study have an array of different decision-making responsibilities and do tackle specific problems, these specific tasks are mainly coupled with a more general task such as instruction for example. This type of task is thus not that clearly delineated from the other tasks.

Fourthly, the task of teacher teams may pertain to *pedagogy*, as it is one of the team-types distinguished by Drach-Zahavy and Somech (2002) and Smith (2009). This task can be related to supporting student learning and managing student behaviour (e.g. Crow & Pounder, 2000; Supovitz, 2002; Watson, 2005), to communication with parents (e.g. Crow & Pounder, 2000; Flowers et al., 2000) or more general to a discussion of the teaching and pedagogy and the challenges experienced by teachers (e.g. Havnes, 2009).

A following and related task of teacher teams may include *special or social services*. Pounder (1998) stated that special services teams are responsible for the evaluation, placement, and educational plans of exceptional students. They may include special education teachers, professional support staff, administrators, representative parents, and others. The responsibilities of this type of team are not limited to pure educational tasks but stretch further into the social and psychological functioning of students. Both types of teams (special and social services) can be seen as similar to some extent (the social service team in the study of Tonso et al. (2006) included a special education teachers for example) and might be integrated into one team in some schools and their tasks are thus seen as belonging to the same task category.

Sixthly, teacher teams can have tasks related to *innovation and school reform* (Meirink et al., 2010). Quite often teams are being associated with school reform or innovation. Euwema and van der Waals (2007) pointed to the fact that the environment of schools is increasingly dynamic and complex. And this will lead to a decrease in the predictability of developments causing an increased pressure on the ability of the school to adapt and innovate. The authors pointed to these developments as an important, although not the only, reason for organising schoolwork in teams. Meirink et al. (2010) and Meirink (2007) spoke of temporary 'innovative teams' that are responsible for designing and experimenting with new teaching practices. Overall, enhancing teacher collaboration appears to be a rather 'recent' innovative attempt in a few countries, organising teachers in teams is one of the ways to accomplish this goal.

Some studies, such as Watson (2005), spoke of *learning* teams, in which the learning of teachers is of central importance. This can entail learning of teachers considering the teaching practice, as such Watson (2005) stated that the professional learning teams, sometimes referred to as (professional) learning communities (Saunders, Goldenberg, & Gallimore, 2009; Dickinson, 2009; Cheng & Ko, 2009; Williams, 2010) or communities of practice (Curry, 2008), in his study are involved in the implementation of a school improvement process. This is closely linked to the category 'innovation' and shows that the boundaries between the different task categories can be blurred. Overall the (professional) learning teams discussed in the literature are directed towards improving student performance. This thus forms a bridge between the task of learning and of instruction: teachers need to learn in order to improve their instruction and thus enhance student learning.

Finally, some studies appear to mention a mere *material or practical* 'task' when discussing teacher teams. For example, Main and Bryer (2005) pointed at the sharing of physical space and/or resources as being part of the 'task' of teacher teams and Smith (2009) referred to instrumental teams who provide practical support. This clearly forms a rather infirm base for teacher teams and a grouping of teachers showing a mere material or practical base upon which to collaborate can be merely considered as working in proper 'teams'. Smith (2009) furthermore pointed at informational teams and emotional teams. In the first, members merely exchange information that they need in order to perform the teaching profession. The latter provides a supportive framework with encouraging words and sympathetic understanding. It becomes clear that these tasks on themselves as well are not enough to justifiably speak of an actual 'team' and as such they are mentioned in this task category.



4.2.2 Discipline level: Disciplinary or interdisciplinary

A second important distinction to be made is whether teacher teams are organised disciplinary or interdisciplinary (teachers teaching the same or different subjects). This can be linked to the dimension of skill differentiation mentioned by Hollenbeck, et al. (2012): this means that members have more or less specialised knowledge or functional capacities that make them more or less difficult to replace. As such, in interdisciplinary teams teachers have expertise in different subject areas. In some school contexts this distinction may be less relevant. For example, in primary or elementary schools teachers are responsible for teaching all courses and are thus not specialists in one or more disciplines. In such contexts it appears irrelevant to speak of disciplinary or interdisciplinary since every teacher is responsible for all disciplines to be taught. An exception here could be when a different teacher who is responsible for teaching crafts or music, a special education teacher,... is included in the team. When teachers are not the only team members, 'interdisciplinary' refers to the fact that the team is comprised of people from different professions (e.g. nurses, social workers, specialists,...).

4.2.3 Grade level: Cross or within grade level

Another important distinction that can be made in teams of teachers is the fact whether they are situated on a grade level (responsible for students in the same grade level) or not (responsible for students cross grades). Pounder (1998) states that a common middle school structure appears to consist of interdisciplinary grade-level teams. As such it should not come as a surprise that quite a lot of the studies (of those who clarify these characteristics) referred to such teams in middle schools.

4.2.4 Temporal duration

Considering temporal duration (whether the teams are designed temporarily or for a longer time period), there are only two studies explicitly referring to temporary teams (Meirink, 2007; Meirink et al., 2010). Most other studies seem to refer to teams that are more long-term (a temporal duration of the collaboration is not given), except for Drach-Zahavy and Somech (2002) and Somech (2005) who mentioned that the teams under study already worked together for at least one year.

3.2.5 Team entitativity

A final and vital feature of teacher teams is a dimension that is captured in the term of 'entitativity' (Campbell, 1958). This terms covers the fact whether an aggregate of persons actually behaves as a system. According to Campbell, entitativity includes 'the perception that a social aggregate is a coherent, unified and meaningful entity' (Haslam, Rotschild, & Ernst, 2004, p.65). It entails the degree of being a unity or a coherent whole and thus represents the interdependence that is present in groups or teams (Campbell, 1985). Ohlsson (2013) also states that teams possessing a strong level of interdependence see themselves as an actual team. In this article, team entitativity is conceived as the degree to which a collection of individuals is an actual team as described by Cohen and Bailey (1997). The criteria in the definition of Cohen and Bailey (1997) will serve as a basic measure of team entitativity. These six criteria entail: a collection of individuals; who are interdependent in their tasks; share responsibilities for outcomes; see themselves and are seen by others as an intact social entity; embedded in one or more social systems; and manage their relationships across organisational boundaries (what will be referred to as boundary crossing). The more criteria the teams meet and the stronger they fulfill them, the higher their degree of team entitativity or 'teamness' will be'. The concept of team entitativity is further elaborated upon in the review article of Vangrieken, Dochy and Raes (submitted).



4. Conclusion

This short article tried to answer the questions: 'How is the term 'teacher teams' used and defined in previous research?' and 'What types of teacher teams has previous research identified or explored?'. This study results in the following:

First, starting from a comprehensive definition of 'teams' that provides clear criteria from which can assessed whether groups can rightfully be called 'teams' (Cohen & Bailey, 1997), we find that teacher teams in literature in most cases do not meet these criteria or at least often no effort is made to make definitions and characteristics of groups of teachers sufficiently explicit. A clear-cut unambiguous definition of teams in schools or teacher teams appears to lack. Different authors discussing teacher teams tend to use different interpretations of the term 'team' and seem to discuss different types of teams. Most of the articles lack an insightful definition of what they mean when they use the term 'team' which makes interpreting the results of their research quite challenging. Moreover, no single description of teacher teams met all criteria of a team as described by Cohen and Bailey (1997). So, 'Teachers groups' appear to be mostly 'groups' instead of highly entitative 'teams'. This finding is in line with a conclusion made by Smith (2009) who stated that teams as they are usually defined outside education are perceived as dysfunctional in the experiences of science teachers, they do not exist or do not work in schools. Smith (2009) furthermore stated that although the teachers in the study experience membership of multiple teams, it can be questioned whether these so called teams really exist in the meaning of 'teams' as described in the conventional team literature. In the latter, a team is presumed to be much more than a collection of individual teachers who are gathered around their timetabled subjects, staffroom or science department (Smith, 2009). As a consequence, it would be interesting to find out what criteria are really met by the so-called teacher teams in literature. It would be reasonable to argue that some teacher groups discussed in literature are more a 'team' than others in the sense that they meet more of the aforementioned criteria (what is previously referred to as team entitativity). At this point, it is difficult to assess the degree of team entitativity of teams described in literature based on the current vague information in most studies. Future studies on teacher teams should go deeper into the real origin and scope of the teams.

A typology for teacher teams can be based on the following axes: task (governance/management, instruction, problem-specific planning, pedagogy, special/social services, innovation/school reform, learning, material/practical), discipline level (disciplinary or interdisciplinary), grade level (within or cross grade-level), temporal duration (temporary or lasting) and team entitativity (low, moderate or high). As a consequence, an overarching typology is proposed in figure 1.



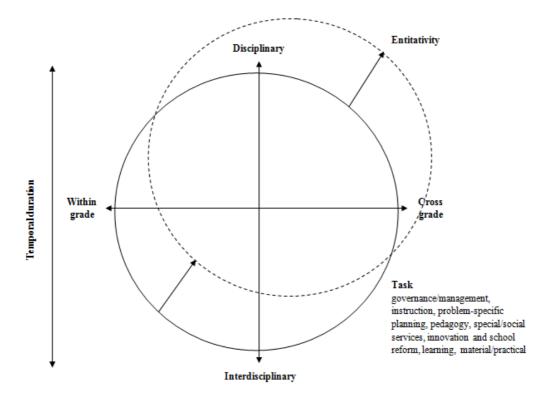


Figure 1. Typology.

There appears to be a vast amount of variation in 'teacher teams', with a variety in the task and organisation of the teams. The above discussed framework appears to be useful in trying to clarify what these 'teams' consist of. By giving a specification of all of these distinctions, which lacks in a lot of studies, a rather clear description can be given of what sort of teacher team is under study.

Keypoints

- There appears to be a lack of clarity and a large variety within the concept of teacher teams. They can have a large diversity of tasks and can be organised in different ways. The lack of a clear description makes it difficult to draw warranted conclusions since it may not be justified to make generalisations across different types of teacher teams.
- When using the definition of Cohen and Bailey (1997) of teams to assess whether 'teacher teams' can rightfully be called 'teams', we conclude that groupings of teachers are mostly 'groups' rather than 'teams' since 'teams' are often defined quite vaguely in team literature and these descriptions hardly ever meet all criteria mentioned in this definition.
- A typology for teacher teams based on the axes of task, discipline level, grade level, temporal duration and team entitativity is a useful framework to describe the sort of teacher team under study. This thus creates some clarity among the indistinctness surrounding the use of the term 'teacher team'.



References

- Achinstein, B. (2002). Conflict amid community: the micropolitics of teacher collaboration. *Teacher college record*, 104(3), 421-455. Retrieved from http://www.tcrecord.org/
- Avila de Lima, J. (2001). Forgetting about friendship: Using conflict in teacher communities as a catalyst for school change. *Journal of Educational Change*, 2, 97-122. Retrieved from http://link.springer.com
- Bertrand, L., Roberts, R.A., & Buchanan, R. (2006). Striving for success: Teacher perspectives of a vertical team initiative. *National Forum of Teacher Education Journal-Electronic*, 16(3). Retrieved from http://www.allthingsplc.info
- Brouwer, P. (2011). *Collaboration in teacher teams* (Doctoral dissertation). Retrieved from http://dspace.library.uu.nl/handle/1874/214140
- Brouwer, P., Brekelmans, M., Nieuwenhuis, L., & Simons, R.J. (2012). Fostering teacher community development: A review of design principles and a case study of an innovative interdisciplinary team. *Learning Environments Research*, 15(3), 319-344. doi:10.1007/s10984-012-9119-1
- Campbell, D.T. (1958). Common fate, similarity, and other indices of the status of aggregates of persons as social entities. *Behavioral Science*, *3*(1), 14-25. Retrieved from http://librilinks.libis.be
- Carroll, T.G., & Foster, E. (2008). Learning teams: creating what's next. *National Commission on Teaching and America's Future*. Retrieved from http://nctaf.org
- Cheng, L.P., & Ko, H. (2009). Teacher-team development in a school-based professional development program. *The Mathematics Educator*, *19*(1), 8-17. Retrieved from http://math.nie.edu.sg/ame/matheduc/
- Cohen, S.G., Bailey, D.E. (1997). What makes teams work: Group effectiveness research from the shop floor to the executive suite. *Journal of Management*, 23(3), 239-290.
- Conley, S., Fauske, J. & D.G. Pounder (2004). Teacher work group effectiveness. *Educational Administration Quarterly*, 40(5), 663-703. doi:10.1177/0013161X04268841
- Crow, M.G., & D.G. Pounder (2000). Interdisciplinary Teacher Teams: Context, design, and process. *Educational Administration Quarterly*, *36*(2), 216-254. doi:10.1177/0013161X00362004
- Curry, M. (2008). Critical Friends Groups: the possibilities and limitations embedded in teacher professional communities aimed at instructional improvement and school reform. *Teachers College Record*, 110(4), 733-774. Retrieved from http://www.tcrecord.org/
- Datnow, A. (2011). Collaboration and contrived collegiality: revisiting Hargreaves in the age of accountability. *Journal of Educational Change*, *12*(2), 147-158. doi:10.1007/s10833-011-9154-1
- Decuyper, S., Dochy, F., & Van den Bossche, P. (2010). Grasping the dynamic complexity of team learning: An integrative model for effective team learning in organisations. *Educational Research Review*, 5, 111-133. doi:10.1016/j.edurev.2010.02.002
- Devine, D.J., Clayton, L.D., Philips, J.L., Dunford, B.B., & Melner, S.B. (1999). Teams in organizations: Prevalence, characteristics, and effectiveness. *Small Group Research*, 30, 678-711. doi:10.1177/104649649903000602
- Dickinson, E.B. (2009). *The impact of collaborative teacher teaming on teacher learning* (Specialist Project). Retrieved from http://digitalcommons.wku.edu
- Dochy, F., Gijbels, D., Raes, E., & Kyndt, E. (2014). Team learning in education and professional organisations. In S. Billet, C. Harteis & H. Gruber (Eds.), *International Handbook of Research in Professional and Practice-based Learning*. The Netherlands: Springer.
- Drach-Zahavy, A., & Somech, A. (2002). Team heterogeneity and its relationship with team support and team effectiveness. *Journal of Educational Administration*, 40(1), 44 66. doi:10.1108/09578230210415643
- Euwema, M.C., & Van der Waals, J. (2007). Teams in scholen. Samen werkt het beter. Leusden: BMC.
- Flowers, N., Mertens, S.B., & Mulhall, P.F. (2000). What makes interdisciplinary teams effective? *Middle School Journal*, *31*(4), 53-56. Retrieved from http://limo.libis.be
- Gajda, R., & Koliba, C.J. (2008). Evaluating and improving the quality of teacher collaboration: A field-tested framework for secondary school leaders. *NASSP Bulletin*, 92(2), 133-153. doi:10.1177/0192636508320990



- Gunn, J.H., & King, M.B. (2003). Trouble in paradise: power, conflict and community in an interdisciplinary teacher team. *Urban Education*, *38*(2), 173-195. doi:10.1177/0042085902250466
- Hackmann, D.G., Petzko, V.N., Valentine, J.W., Clark, D.C., Nori, J.R., & Lucas, S.E. (2002). Beyond interdisciplinary teaming: Findings and implications of the NASSP National Middle Level Study. *NASSP Bulletin*, 86(632), 33-47. doi:10.1177/019263650208663204
- Haslam, N., Rothschild, L., & Ernst, D. (2004). Essentialism and entitativity: Structures of beliefs about the ontology of social categories. In V. Yzerbyt, C.M. Judd & O. Corneille (Eds.), *The psychology of group perception: Perceived variability, entitativity and essentialism* (pp. 61-78). New York (NY): Psychology Press.
- Havnes, A. (2009): Talk, planning and decision-making in interdisciplinary teacher teams: A case study. *Teachers and Teaching: Theory and Practice*, 15(1), 155-176. doi:10.1080/13540600802661360
- Hollenbeck, J.R., Beersma, B., & Schouten, M.E. (2012). Beyond team types and taxonomies: A dimensional scaling conceptualization for team description. *Academy of Management Review*, *37*(1), 82-106. doi:10.5465/amr.2010.0181
- Kelchtermans, G. (2006). Teacher collaboration and collegiality as workplace conditions. A review. *Zeitschrift für Pädagogik*, 52(2), 220-237. Retrieved from http://www.pedocs.de
- Leonard, L., & Leonard, P. (2003). The continuing problem with collaboration: Teachers talk. *Current Issues in Education*, 6(15). Retrieved from http://cie.asu.edu
- Lomos, C., Hofman, R.H., & Bosker, R.J. (2011). The relationship between departments as professional learning communities and student achievement in secondary schools. *Teaching and Teacher Education*, 27, 722-731. doi:10.1016/j.tate.2010.12.003
- Main, K. (2007). A year long study of the formation and development of middle school teaching teams (Doctoral dissertation). Retrieved from https://www120.secure.griffith.edu.au/rch/file/64a6473e-3a2b-f149-bd30-6e2033bbef0f/1/02Whole.pdf
- Main, K., & Bryer, F. (2005). What does a 'good' teaching team look like in a middle school classroom? Stimulating the "Action" as Participants in Participatory Research, 2, 196-204. Retrieved from http://www.griffith.edu.au
- Meirink, J.A. (2007). *Individual teacher learning in a context of collaboration in teams* (Doctoral dissertation). Retrieved from https://openaccess.leidenuniv.nl
- Meirink, J.A., Imants, J., Meijer, P.C., & Verloop, N. (2010). Teacher learning and collaboration in innovative teams. *Cambridge Journal of Education*, 40(2), 161-181. doi:10.1080/0305764X.2010.481256
- Mertens, S.B., & Flowers, N. (2004). Research summary: Interdisciplinary teaming. Retrieved from http://www.nmsa.org
- Ohlsson, J. (2013). Team learning: collective reflection processes in teacher teams. *The Journal of Workplace Learning*, 25(5), 296-309. doi:10.1108/JWL-Feb-2012-0011
- Park, S., Henkin, A.B., & Egley, R. (2005). Teacher team commitment, teamwork and trust: exploring associations. *Journal of Educational Administration*, 43(5), 462 479. doi:10.1108/09578230510615233
- Pounder, D. (1998). Chapter 5: Teacher Teams: Redesigning Teacher's Work for Collaboration. In D. Pounder (Ed.), *Restructuring Schools for Collaboration: Promises and Pitfalls* (pp. 65-88). Albany: State University of New York Press.
- Raes, E., Kyndt, E., Decuyper, S., Van den Bossche, P., & Dochy, F. (submitted). Group development and team learning: How development stages affect team-level learning behavior. *Human Resource Development Quarterly*.
- Rone, B.C. (2009). The impact of the data team structure on collaborative teams and student achievement (Doctoral dissertation). Retrieved from http://proquest.umi.com
- Salas, E., Burke, C.S., & Cannon-Bowers, J.A. (2000). Teamwork: Emerging principles. *International Journal of Management reviews*, 2(4), 339-356.
- Saunders, W.M., Goldenberg, C.N., & Gallimore, R. (2009). Increasing achievement by focusing grade-level teams on improving classroom learning: A prospective, quasi-experimental study of title I schools. *Am Educational Research Journal*, 46(4). doi:10.3102/0002831209333185



- Scribner, J.P., Hager, D.R. & Warne, T.R. (2002). The paradox of professional community: Tales form two high schools. *Educational Administration Quarterly*, *38*(45). doi:10.1177/0013161X02381003
- Smith, G. (2009). *If teams are so good... Science teachers' conceptions of teams and teamwork* (Doctoral dissertation). Retrieved from http://eprints.qut.edu.au
- Somech, A. (2005). Teachers' personal and team empowerment and their relations to organizational outcomes: contradictory or compatible constructs? *Educational Administration Quarterly*, 41(2), 237-266. doi:10.1177/0013161X04269592
- Somech, A. (2008). Managing conflict in school teams: the impact of task and goal interdependence on conflict management and team effectiveness. *Educational Administration Quarterly*, 44. doi:10.1177/0013161X08318957
- Supovitz, J.A. (2002). Developing communities of instructional practice. *Teachers College Record*, *104*(8), 1591-1626. Retrieved from http://www.tcrecord.org
- Tonso, K.L., Jung, M.L. & M. Colombo (2006). "It's hard answering your calling": Teacher teams in a restructuring urban middle school. *Research in Middle Level Education*, 30(1), 1-22. Retrieved from http://www.eric.ed.gov
- Van den Bossche, P., Gijselaers, W.H., Segers, M., & Kirschner, P.A. (2006). Social and cognitive factors driving teamwork in collaborative learning environments: Team learning beliefs and behaviors. *Small Group Research*, *37*(5), 490-521. doi:10.1177/1046496406292938
- Vangrieken, K., Dochy, F., & Raes, E. (submitted). Teacher teams and collaboration: A review.
- Visscher, A.J., & Witziers, B. (2004). Subject departments as professional communities? *British Educational Research Journal*, 30(6), 785-800. doi:10.1080/0141192042000279503
- Watson, S. T. (2005). *Teacher collaboration and school reform: Distributing leadership through the use of professional learning teams* (Doctoral dissertation). Retrieved from http://edt.missouri.edu
- Westheimer, J. (2008). Chapter 41: Learning among colleagues: Teacher community and the shared enterprise of education. In M. Cochran-Smith, S. Feiman-Nemser, & J. McIntyre (eds.). *Handbook of Research on Teacher Education*. Reston, VA: Assocation of Teacher Educators; Lanham, MD: Rowman
- Wigglesworth, M. (2011). The effects of teacher collaboration on students understanding: Relating to high school earth science concepts. Montana: LAP LAMBERT Academic Publishing.
- Williams, M.L. (2010). *Teacher collaboration as professional development in a large, suburban high school* (Doctoral dissertation). Retrieved from http://digitalcommons.unl.edu
- Yisrael, S.B. (2008). A qualitative case study: the positive impact interdisciplinary teaming has on teacher morale (Doctoral dissertation). Retrieved from http://etd.ohiolink.edu

Appendix

Table 1. Typology framework

TASK

Governance/management¹

Instruction (according to grade level or subject)

Instruction/teaching

- examining individual student work generated from common formative assessments (Rone, 2009)
- developing instruction to address the academic needs of students (Saunders et al., 2009)
- keep track of the progress and revise instruction (Saunders et al., 2009)
- studying previous test data of students (Bertrand, Roberts, & Buchanan, 2006)
- coordinating instruction, communication and assessment for a common group of students (Flowers et al., 2000)

¹ As mentioned earlier, management and special services teams were not the focal point of this study because of the fact that these often include other team members than just teachers and for that reason no literature considering this type of teams is discussed here.



- developing and implementing interdisciplinary curriculum and teaching strategies based on the developmental needs of the children (Crow & Pounder, 2000)
- developing coordinated interventions and management strategies to tackle problems considering student learning (Crow & Pounder, 2000)
- team teaching (Brouwer, 2011; Brouwer, Brekelmans, & Nieuwenhuis, 2012; Main, 2007; Main & Bryer, 2005)
- coherent curriculum development (organisation of education and discussing students) (Brouwer, 2011; Brouwer et al., 2012)

Planning instruction

- planning, coordinating and evaluating of curriculum and instruction across academic areas (Yisrael, 2008; Mertens & Flowers, 2004)
- planning curriculum and developing assessments (Gunn & King, 2003)
- realising common goals across different classes (Main & Bryer, 2005)
- set and share academic goals (Saunders et al., 2009)
- collaboratively planning and administering assessment (Main & Bryer, 2005)
- development and implementation of the subject matter (Somech, 2008)
- collaborating on instructional strategies (Wigglesworth, 2011; Supovitz, 2002)
- evaluating collaboratively constructed materials (Wigglesworth, 2011)
- developing course syllabi and benchmark tests (Bertrand et al., 2006)
- planning interdisciplinary teaching (Havnes, 2009)
- coordinating individual subject-specific teaching (Havnes, 2009)
- work together to plan, design, integrate and implement shared instructional methods, curricula and assessment targeted towards curricular and pedagogical alignment (Watson, 2005)
- decision-making authorities considering curricular emphasis and coordination (Conley et al., 2004)
- decision-making authorities considering student class assignment and flexible grouping strategies, student assessment (Conley et al., 2004)
- decision-making authorities considering curricular and co-curricular scheduling (Conley et al., 2004)

Problem-specific planning (tackle specific problems. Temporary or long term) Planning teams are responsible for tackling specific problems and can be of a temporary or a longer lasting nature (Park et al., 2005)

Pedagogy

- developing coordinated interventions and management strategies to tackle problems considering student learning and/or behavior (Crow & Pounder, 2000)
- providing coordinated communication with parents (Crow & Pounder, 2000)
- building-wide support and intervention programs for students, monitor the effectiveness of these programs and make improvement recommendations (Watson, 2005)
- communication (with families) (Mertens & Flowers, 2004)
- continually exploring their curricular and pedagogical strategies and the influences of these on student learning (Supovitz, 2002)
- discussing teaching, practice, the challenges they experience as teachers, and pedagogy (Havnes, 2009)
- decision-making authorities considering student management and behavioural interventions (Conley et al., 2004)
- decision-making authorities considering coordinated parent communication (Conley et al., 2004)

C	• • • •	1/	1	service	
$\sim n_{\theta}$	rını	190	rini	corvico	C

Innovation and school reform

² See 1



	- designing and experimenting with new teaching practices (Meirink et al., 2010)		
	Learning - collaboratively learning (Saunders et al., 2009; Watson, 2005) - sharing expertise and experience across generations (Carroll & Foster, 2008)		
	Material/practical These teams lack a shared task, but share for example resources. This collaboration is mostly realised for practicality reasons. - budgetary allocation (Main & Bryer, 2005) - sharing of resources and/or physical space (Main & Bryer, 2005) - practical support (Smith, 2009)		
DISCIPLINE LEVEL	Interdisciplinary Teachers from different subject areas are part of the team.		
	Disciplinary Teachers from the same subject area or part of the team.		
GRADE LEVEL	Within-grade level Teachers responsible for students from the same grade-level		
	Cross-grade level Teachers responsible for students from different grade levels		
TEMPORAL DURATION	Temporary For a definite time/project		
	Lasting		
TEAM	Low (1-2 criteria met)		
ENTITATIVITY	Moderate (3-4 criteria met)		
	High (5-6 criteria met)		